

REMARKS

Claims 1-31 and 64-85 are pending. Claims 1, 3, 5, 6, 9, 10, 12, 13, 15, 24, 27, 31, and 85 are amended to correct various informalities. Claims 64-74 are canceled without prejudice or disclaimer toward pursuit of these claims in a divisional or continuation application. Claim 5 has been amended to incorporate all the limitations of claim 1, from which it formerly depended.

Examiner Interview Summary

On August 25, 2006, the undersigned attorney spoke via telephone with Examiner Leung discussing the prior art and the meaning of claim terms. As discussed in the interview, the definition of “substantially parallel to shim thickness” from page 8 of the specification has been incorporated into the claims. Additionally, as discussed at the interview, the claims have been amended to clearly recite that the unit operation occurs within the portion of the flow path through which there is a straight line. The Bennett and Autenreith references do not have a flow path that is “substantially parallel to shim thickness.” In the Schoenman reference, there is no unit operation in the portion of the flow path through which there is a straight line in three adjacent shims. In light of these differences, there was likely agreement that the claims were patentable over the prior art of record.

Rejections under 35 U.S.C. §112, Second Paragraph

Claims 1, 3, 6, 9, 10, 12, 13, 24, 27, and 85 have been amended to address the various issues mentioned in the office action. These amendments do not affect claim scope in any way.

Claim 9 has not been amended to recite “the” fluid since claim 1 does not recite a fluid, but rather a device capable of conducting a unit operation on a fluid.

Accordingly, withdrawal of the section 112, 2nd paragraph rejection of is respectfully requested.

Rejection as Anticipated by Schoenman et al.

Claims 1-4, 6-17, 21, 24-30, 79 and 85 have been rejected under 35 USC §102(b) as anticipated by Schoenman et al. U.S. Pat. No. 3,881,701.

This rejection is respectfully traversed. These claims all require either (1) conducting a unit operation in a flow path in at least three adjacent shims “wherein a straight, unobstructed line is present through the flow path in said at least three shims,” (2) forming a device capable of performing a unit operation in a flow path in at least three adjacent shims, or (3) in claim 27 conducting a unit operation in a flow path in a plurality of shims where the flow path is parallel to shim thickness. These features are not found in Schoenman. In Schoenman, the unit operations occur either outside the device (chemical reaction) or on the surface plate (heat transfer). There is no unit operation occurring in the flow path in plates 16, 18, 20, 22, 24 of Schoenman.

Unlike the claimed invention, in Schoenman, heat transfer does not occur in the portion of the flow path where there is “a straight, unobstructed line is present through the flow path in said at least three shims.” Instead, heat transfer occurs only at the region adjacent the end plate.

Nor does any other unit operation occur within Schoenman’s device.

Two fluids can be mixed within Schoenman’s device; however, these fluids do not chemically react with each other. The reaction (combustion) occurs outside the device in the reaction zone (see col. 2, line 38 of Schoenman, referring to the “reaction zone”) where fuel (and inert atomizing agent) are combined with oxidant.

As the Examiner is aware, applicants can be their own lexicographers. The Examiner is correct that limitations from the specification are not to be read into the claims. However,

definition of claim terminology must be read into the claims. The Examiner cannot ignore the applicants' definition of claim terms. As stated in MPEP § 2111.01 (III), in the section entitled "Applicant May Be Own Lexicographer:"

Where an explicit definition is provided by the applicant for a term, that definition will control interpretation of the term as it is used in the claim. *Toro Co. v. White Consolidated Industries Inc.*, 199 F.3d 1295, 1301, 53 USPQ2d 1065, 1069 (Fed. Cir. 1999) (meaning of words used in a claim is not construed in a "lexicographic vacuum, but in the context of the specification and drawings"). . . . The specification should also be relied on for more than just explicit lexicography or clear disavowal of claim scope to determine the meaning of a claim term when applicant acts as his or her own lexicographer; the meaning of a particular claim term may be defined by implication, that is, according to the usage of the term in context in the specification. See *Phillips v. AWH Corp.*, 75 USPQ2d 1321 (Fed. Cir. 2005) (*en banc*).

MPEP § 2111.01 (III)

Page 22 of the Office Action states "It is further noted that several of the independent claims merely recite a process of using the device to broadly conduct a 'unit operation.' The Examiner asserts that any operation on the fluid would meet the claims, including the simple act of transporting fluid through the device, without any physical and/or chemical change to the fluid." This assertion is incorrect because it improperly contradicts applicants' clear definition. On page 8, line 16 of the specification, applicants state "'Unit operation' means chemical reaction, vaporization, compression, chemical separation, distillation, condensation, heating and cooling. 'Unit operation' does not mean merely mixing or fluid transport."

Thus, "mixing" and "fluid transport" are not unit operations as that term is defined in the instant application.

With regard to claims 11 and 12, edge features are defined on page 13 of applicants' specification and illustrated in Fig. 9. Applicants' definition is unequivocal, "An edge feature is a

structure on the border of an aperture that causes at least a 0.1% variation, more preferably at least a 1% variation in the diameter of an aperture.” The MPEP clearly states that applicants can be their own lexicographers. The claim term “edge features” must be understood in view of applicants’ definition. Since Schoenman does not have edge features, claims 11 and 12 are additionally patentable on this ground.

Accordingly, withdrawal of this rejection is respectfully requested.

Rejection as Anticipated by Bennett et al.

Claims 1, 2, 4-6, 8-17, 21, 24-30 and 75-78 have been rejected under 35 USC §102(a) as anticipated by Bennett et al. U.S. Pat. No. 6,192,596.

This rejection is respectfully traversed. Page 24 of the Office Action states that “although unit operations may occur in the portions of the flow path that are perpendicular to the shim thickness, the device/process still meets the claim because these portions are still considered part of the continuous flow path.” The independent claims are now amended to further emphasize that the device/process must conduct or be capable of conducting a unit operation in the portion of the flow path “in which a straight, unobstructed line is present.” Thus, the claims clearly require the unit operation to occur in the portion of the flow path that is parallel to shim thickness.

Furthermore, page 24 of the Office Action states that “The general direction of Fluid A through the shims is ‘substantially’ parallel to shim thickness.” As a matter of definition, this is incorrect. In applicants’ glossary (page 8, lines 9-15 of the specification) defines that “A flow path that travels parallel to shim thickness over the surface of a shim and again runs parallel to shim thickness is not ‘substantially parallel to sheet (or shim) thickness.;;’ alternatively stated ‘substantially parallel to sheet (or shim) thickness’ does not include flow through headers/footers in the first shim style.” Therefore, by definition, flow through Bennett’s device is not substantially parallel to shim thickness. Furthermore, in the current amendment, this definition has been directly incorporated into the claims.

Accordingly, withdrawal of this rejection is respectfully requested.

Rejection as Obvious Over Autenrieth In View Of Swift et al.

Claims 13-23, 27-31 and 80-85 have been rejected under 35 USC §103(a) as obvious over Autenrieth U.S. Pat. No. 6,096,286 in view of Swift et al. U.S. Pat. No. 4,516,632.

This rejection is respectfully traversed. Autenrieth teaches a conventional shim design in which unit operations occur perpendicular to shim thickness. This is the opposite of applicants' claimed invention.

Page 25 of the Office Action states that "although unit operations may occur in the portions of the flow path that are perpendicular to the shim thickness, the device/process still meets the claim because these portions are still considered part of the continuous flow path." The independent claims are now amended to further emphasize that the device/process must conduct or be capable of conducting a unit operation in the portion of the flow path "in which a straight, unobstructed line is present." Thus, the claims clearly require the unit operation to occur in the portion of the flow path that is parallel to shim thickness.

Furthermore, page 25 of the Office Action states that "The general direction of flow through the shims (i.e., the plates 13; Fig. 2) is 'substantially' parallel to shim thickness." As a matter of definition, this is incorrect. In applicants' glossary (page 8, lines 9-15 of the specification) defines that "A flow path that travels parallel to shim thickness over the surface of a shim and again runs parallel to shim thickness is not 'substantially parallel to sheet (or shim) thickness.;" alternatively stated 'substantially parallel to sheet (or shim) thickness' does not include flow through headers/footers in the first shim style." Therefore, by definition, flow through Autenreith's device is not substantially parallel to shim thickness. Furthermore, in the current amendment, this definition has been directly incorporated into the claims.

Accordingly, withdrawal of this rejection is respectfully requested.

Conclusion

If the Examiner has any questions or would like to speak to Applicants' representative, the Examiner is encouraged to call Applicants' attorney at the number provided below.

Respectfully submitted,

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By: __/Frank Rosenberg/_____

send correspondence to:
Frank Rosenberg
18 Echo Hill Lane
Moraga, CA 94556

Frank Rosenberg
Registration No. 37,068
tel: (415) 383-3660